

ABSTRACT**DEVICE FOR MONITORING THE INTEGRITY OF INFORMATION
DELIVERED BY A HYBRID INS/GNSS SYSTEM**

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The device is for monitoring the integrity of the position and speed information supplied by a hybrid system comprising an inertial unit INS (1) reset using a GNSS satellite positioning receiver (2) by means of a Kalman hybridization filter (3) using a reset gain K and an evolution matrix F . It includes a satellite problem-detector circuit (4) comprising a bank of predictor/estimator filters (40_i) which uses the gain K and the evolution matrix F of the Kalman hybridization filter (3), each filter observing the deviation between the positioning point obtained from the N visible satellites, in the form of geographic coordinates, delivered by the GNSS receiver (2) and one of the positioning points $P_{(N-1)i}$, also in the form of geographic coordinates, delivered by this same GNSS receiver (2), obtained by using $N-1$ of the N visible satellites for resolution, and test circuits (41_i) comparing the states of the predictor/estimator filters (40_i) with their variances and detecting a satellite failure when a test is positive, the deviation found being greater than a detection threshold.

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Fig. 3